

Wind Mills in Holland.

The continual winds blowing from the Atlantic furnished the power gratuitously to whirl the vanes and turn the water-wheel attached to the wind-mill. There has been little or no improvement made in this machine in Holland for 1,600 years. No other power is so simple, cheap, or reliable. Without its application, two-thirds of Holland and one-fifth of Belgium would even know, in the noon-day of steam power, of necessity have to be yielded back to the ocean, because the cost of steam machinery, fuel, repairs and attendance, could not be supported from the profits of the land.

A correspondent of the *Chicago Tribune* says "there are 12,000 wind-mills in Holland and Flanders, Belgium, each doing from six to ten horse-power service, according to the strength of the wind, and working twenty-four hours per day, and every day in the month during the rainy season, and when the snows and ice are melting and the streams are high. The annual cost of the wind-mills in Holland is \$4,000,000. Twenty times that sum would not operate steam power sufficient to do their work, nor recollect that all the coal consumed in Holland has to be imported from England or Belgium.

Go where you will, you are never out of sight of wind-mills in motion. In the suburbs of large cities and at certain points where the water of the ditches and canals are collected to be thrown over the embankments, they are congregated like armies of giants, and never cease swinging their long, huge arms. They are constructed of much larger dimensions than those seen in the United States. The usual length of the extended arms is about 80 feet, but many of them are more than 120 feet.

But the wind-mills in Holland are not exclusively employed in lifting water, but are used for every purpose of the stationary steam engine. I observed a number of them at Rotterdam, Antwerp, the Hague, and here at Amsterdam, engaged in running saw-mills, cutting up logs brought from Norway, and others were driving planing-mills and flouring-mills, brick-making machines, or beating hemp.

Those used to lift water out of ditches into canals and embanked rivers have water-wheels instead of pumps attached to them, as they are less liable to get out of order, and are thought to remove more water to a given power.

Shelter for Tools.

Now that harvesting is over, take care of the tools. A harvester that costs \$200, is too expensive a piece of machinery to lie out in all weathers, exposed to wind, sun and rain. One of our correspondents some time since made the startling announcement that on an average they did not do over two months' work before they were worn out.—estimating that two weeks' labor was got out of them each year, and that in four years they were used up. Now this ought not so to be, and yet it is on a par with much of the farming in the west. Build a shelter, be it ever so cheap, and store your machinery in it the first thing after getting your grain in the stack. Take out the sickle, oil it, and lay it away for safe keeping in your house. Clean thoroughly all the metal work and rub it over with tallow, to save rusting, for this not only destroys your machine, but causes friction, which will rack it to pieces when it is next needed for use. And as soon as you can, paint it over. Paint preserves your wood and keeps it from sun cracks and rot. If it is sheltered and painted, and kept from rusting, and the nuts properly screwed up when in use, a good harvester will last a dozen years with occasional renewal of the sickle.

Let your tool house be as much of a necessity on your farm as your stable for the horses; and if it is not built, let it be laid down in your minds as one of the most important things needed in the immediate future.—*Farmers' Union.*

THE TROY N. Y. papers contain accounts of a wonderful piece of mechanism which has recently been produced by F. Schroeder, an Amsterdam jeweller. It is called the "Great Mechanical City," and is twenty feet long by fifteen feet wide. There are houses, castles, churches and stores in it, just as they appear in almost any European city. People walk and ride about. Horses and waggons and others railway cars pass through the streets. Boats pass up and down the river, while some are loading and unloading at the docks. Mills are in motion. A fountain plays in the public park, and a band of musicians fills the air with melody. There are also forts with soldiers parading about them, blacksmiths' shops with artisans at work in them, and pleasure gardens with people dancing in them. Other scenes go to make this a wonderful structure indeed.

Horticulture.

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THE ORCHARD.

Seasonable Notes.

SEED-BEDS—See to it that the young plants are properly shaded. Keep the fingers and hoe constantly on the move, the former in removing weeds and the latter in preventing undue caking of the soil.

NURSERY TREES—These should receive, so far as practicable, the same treatment as the seed-bed plants. Substitute new labels for such as are injured or defaced, referring to the "plan" in all cases of forgetfulness or uncertainty. If no such plan exists, let the drawing of it occupy a portion of the very first quiet evening or wet afternoon there is to spare, and do not until the orchard also and every field, fence, ditch, stream, &c., on the farm is embraced in the sketch.

SPRING PLANTED TREES should be looked after closely, as the recent drought will have told severely on such as were not very carefully set out. Wherever symptoms of unhealthfulness appears, the soil should be well stirred with a fork, or altogether removed to a depth of three or four inches, and a good watering administered, after which the soil may be replaced, and a heavy mulch applied, as recommended last month.

EVERGREENS—Many persons prefer transplanting these in spring, but they may be removed with equal success now if due care is taken that the roots are not injured by too close cutting or by exposure. Select a damp, cloudy day; make your holes roomy enough laterally—very many persons blunder in this respect, leave as large a mass of earth as possible adhering to the roots of the tree or shrub about being displaced. Water liberally at time of planting if the soil is dry, and there need be little fear about the result.

DRYING FRUIT—A fruit-dryer of some kind is now-a-days considered indispensable by orchardists of any pretension, and there is little doubt that the enhanced value of the fruit treated in this manner, not to speak of the vast amount of drudgery saved, will more than counterbalance all preliminary outlay. In cases in which the supply of fruit is limited to the requirements of the household, the process of sun-drying is usually resorted to. The fruit after being pared, cor'd, and sliced into pieces of the proper size, is placed in thin layers on frames or sashes, and exposed to the direct rays of the sun. A covering of thin gauze will exclude flies and other insects, and the drying process will be very much accelerated if the frames are placed in a warm room at night, and during the prevalence of wet or cloudy weather.

MARKETING FRUIT—The practice of shaking or knocking the fruit off the trees is a most reprehensible one under any circumstance, and especially so as regards fruit intended for market. If it is true that "a little leaven leaveneth the whole lump," it is equally certain that a single bruised apple has been the means of spoiling a whole barrel. We have seen a number of appliances for picking fruit—one of which was described in a recent number of the *CANADA FARMER*—but we are inclined to think that where the fruit is very choice and great nicety is required, hand-picking is the best, as it is undoubtedly the safest method of all.

A STRANGE effect seems to have been produced in Blenheim this summer either by disease, lightning, or drought, on many trees. In a number of orchards the outer branches of the apple and pear trees are seemingly scorched and withered up. Also in the woods many pines and other trees are shrivelled up and brown looking.

Fruit-Keeping.

A correspondent of the *Media, Pa., American* gives in that paper an account of a visit to the fruit-preserving house of Nathan Hellings & Bros., at Bristol, Bucks County. The Messrs. Hellings are fruit dealers, doing business in Philadelphia, and an experience of twenty-five years has taught them that "heavy losses were often entailed, caused by the rotting of fruit in stock, this occasioned by the sudden changes of temperature, and by what is technically known by the trade as murky weather. The need, therefore, of some method by which the finest grades of foreign and domestic fruits could be kept, was universally acknowledged. But, whilst thus so commonly recognized as a need of the trade, all efforts put forth to secure the much desired result were regarded, even by the trade, as chimerical and visionary. Mr. Hellings, however, at once went to work, experimenting as to the needs of the case. A series of experiments were entered upon, resulting in the discovery that for most hardy fruits, whether foreign or domestic, a mean temperature of 36 to 38 degrees was needed. Farther, it was demonstrated that not only was this low temperature essential, but that the air must be dry and pure, embracing scientific principles of ventilation and circulation."

On arriving at the house which was built by Mr. Hellings to secure these conditions, the narrator was furnished an overcoat and taken into the fruit rooms. The first room entered was cool, but the larger inner rooms were cold, the thermometer standing at 38°, while outside it indicated 85°.

"There was a striking peculiarity noticeable in the rarity of the air in the house, the exhalations of our breath seeming almost as dense as steam. Another feature was that the air was exceedingly pure, for amidst all that array of goods no effluvia of anything savoring of fruit, could be distinguished. On my remarking this, Mr. Hellings, laughing, replied, 'There's the secret; the whole principle involved in this business is to arrange things in such a way that the fruit flavor cannot escape. And herein is the great difference between a system of fruit preserving which allows the flavor to escape and that which retains it. Have you ever noticed on entering a cellar used for the storage of apples, how strongly the entire place would smell of the fruit, thus demonstrating that the bodies were held in bondage, whilst their spirits were free?' We want both, and we think by this system this much is secured."

"Samples of the russet, the cider apple, the spy and the French spit were each severally tested, and in point of appearance as well as fineness of flavor, they could not be surpassed. These apples, or most of them, were put here last fall, some russets had been here two years, while samples of Bucks county cider apples were shelved in 1872. Strawberries have been kept in this house upwards of thirty days, and used in prime condition, looking as plump and fine as when picked. Pears, always difficult to keep, have been kept over eight months, and sold at fabulous prices. In cutting several of the apples, the core and pips were found to be sound and perfect, a pretty severe test. Mr. David Landreth, a personal friend and neighbor of Mr. Hellings, put a few apples to a still more severe test some few months ago. Professor John W. Smith, an acquaintance of Mr. Landreth's, was returning to England, when, at the instigation of the last named gentleman, a basket of large apples was packed and duly put aboard the vessel as a gift to the professor. These apples had been in the fruit house since last fall. They stood the test of the sea voyage, and a part of them were eaten on the Liverpool Cotton Exchange, to the astonishment of those Britishers of the boards. The main design of the inventor has been to provide a house that can successfully keep for months together, and if need be, for years, fruit for which at the time there may be no demand, and which, if sold at all when the markets are glutted, is sold at ruinous rates. Nor is the invention limited in its operations to fruit. Beef has been housed for ten weeks, and found to be as sweet when cooked as though fresh from the slaughtered carcass. Goods are brought here from Spain, from the West Indies and the Mediterranean. The firm also own a similar storage house in Niagara country, N. Y."

"In a personal visit to this last mentioned house, a year or two since," says the *Country Gentleman*, "we were struck with the fact that the room in